Electromyography (EMG) and Nerve Conduction Studies (NCS)

Electromyography (EMG) and Nerve Conduction Studies (NCS) are tests that measure muscle and nerve function; usually both tests are performed. If both tests are to be done the NCS will be done first. During the NCS, mild electrical currents are applies to the skin on some parts of your body. This is done to see how quickly impulses travel between nerves. EMG assesses muscle function. During the EMG, a fine needle is placed under your skin into the muscle being tested. This process is repeated on other muscles as requested. The needle allows the electrical activity in your muscles to be measured, there is no electrical current applied with the needle. During each test, wavy lines (waveforms) are documented as these lines show how well your nerves and muscles function. The waveforms determine your test results.

Before your test:

 Shower or bathe, but do not apply any powder, deodorant, oils, lotions or perfumes. Your skin should be clean and free of excess oil.

 Wear loose clothing. You may still be asked to put on a hospital gown.

The procedure will take one hour. Please let the technologist know any of the following:

 If you have any bleeding or bruising problems.

 Take any anticoagulants (blood thinners) including aspirin

 Have any immune system problems.

 If you had neck or back surgery

 You may take your routine medications unless instructed differently.

During the test:

 NCS: Small metal electrodes (disks) will be attached to your skin on the area of your body being tested. This is done using a water-based gel or paste. A doctor or technologist will apply mild currents to your skin. Your muscles will twitch; this is expected and will not harm you. Currents may be applied to the same area again or move to another area.

 EMG: Most of the electrodes will be removed from the NCS. The doctor will clean the area being tested with alcohol. A fine needle will be inserted into the muscles in this region. When the needle is inserted you may feel a pinch, this is expected and will not harm you, please relax and follow any instructions provided.

 For best results from the NCS and EMG; the "Patients cooperation is extremely necessary, some discomfort is to be expected".

After the test:

 All electrodes will be removed

 No after care is required except to wash off the gel.

 You may feel tired or have some discomfort; please rest

 If you were instructed to stop medication for the test, ask the provider when to resume your medication.

 Please follow instructions for follow up visit or a call from your provider to discuss results.